Washington State Department of Transportation

Washington State Ferries

PORT TOWNSEND-KEYSTONE PARTNERSHIP: VEHICLE RESERVATIONS

Draft Reservations Overview

The Washington State Department of Transportation (WSDOT) Ferries Division (WSF) Vehicle Reservation System Predesign Report, submitted to the Legislature in January 2010, described a preliminary design and presented cost estimates for a reservation system. The Legislature directed WSF to proceed with implementing the reservation system.

Why did WSF consider a reservation system?

1. During the development of the Long Range Plan, a reservation system was identified as the best operational strategy to address the demand management goals set out by the legislature. In particular, a reservations system would:
   - Make the most of the limited vehicle deck capacity on vessels and limited terminal holding space
   - Reduce the need for expensive capital investments in terminal expansion
   - Provide an opportunity to support long-term ridership growth without significant service or terminal expansion
   - Significantly reduce customer wait times and provide reliable and predictable service even during peak periods.
2. In response to the recommendations in the Long Range Plan, the legislature directed WSF to conduct a predesign study to more thoroughly review the implementation feasibility of a reservation system. The predesign study evaluated:
   - How would a reservation system work for customers and for WSF
   - Operational requirements, which will vary by route
   - Costs and benefits of reservations

Goals for the reservation system

3. The following **goals** were developed to guide the predesign process.
   - The Reservation System needs to work for customers and ferry communities:
     - Easy to use (at the point of booking and upon arrival at terminals)
     - Meets the needs of different customer types (commuters, frequent riders, freight, recreational users)
     - Provides customers certainty with respect to which sailing they can board
     - Provides flexibility to change and cancel reservations
     - Provides options to customers by giving them real time information about their preferred sailing
     - Reduces queuing outside terminals; improve traffic flow around terminals
   - System needs to work for Ferries and improve efficiencies
     - Enables Ferries to spread demand for peak sailings to times when there is available capacity
     - Maximizes use of existing assets

- Serves more customers over time while minimizing capital costs without significantly increasing operating costs
- Integrates with fare collection and WSDOT technologies
- Potential to increase ridership by providing customer certainty

The predesign study approach

4. The approach WSF followed to develop the Predesign Study involved several key elements:
   - Learn from our own experience and from the experiences of other systems:
     - Reviewed recent experience at Port Townsend-Keystone and Anacortes-Sidney B.C. to see what is working and what is not
     - Extensive outreach to other systems to understand how reservations work, where they are successful, and potential pitfalls
   - Develop conceptual design based on how customers really use the system and make travel decisions
     - Engage with a representative group of customers and community interests (Edmonds-Kingston Partnership Group). The Edmonds-Kingston route provides a very useful window into most of the likely challenges facing the successful implementation of a reservation system including:
       - A good mix of commuters, ferry-dependent resident customers, recreational users, and freight customers
       - A relatively short turn-around time between departures
       - One terminal (Kingston) with adequate holding and one (Edmonds) with limited terminal holding space
       - Considerable peak travel congestion in and around terminals that impacts downtown businesses and limits community development goals
     - Make use of WSTC survey data from 2008 and augment as needed
   - Focus on options and evaluate relative costs and benefits by clearly presenting where choices exist and what the key tradeoffs are between options

Broad outlines of the WSF reservation system as discussed in the predesign study

5. The elements of the proposed system can be summarized according to three key areas of study – business rules, vehicle processing and information systems.
   - **Business rules.** The business rules define how the reservation system will work, including how reservations will be made, when they will be made, how much of the boat is available for reservations and what the change and cancelation policies will be. Key business rules are:
     - Up to 90% of the vessel available for reservations during peak periods, including commute periods; minimum of 50% of the vessel available for reservations during off-peak periods
     - Reservations on commute period sailings made available 4 weeks in advance, all other sailings available up to 6 months in advance to provide an extra priority on these sailings for regular users and commuters
     - Because the boat is mostly available for reservations during peak periods, there will be two Priority Access programs to provide Ferry System's regular users with priority access

to allocated space on all sailings to ensure infrequent riders don't monopolize reservations – higher shares during commute
    - Regular reservations (non-priority access) will require pre-payment of fare, while priority access program members may make reservations without pre-paying
    - Since the majority of the boat is available for reservations in the peak, there would be no extra fee for reservations
    - Priority Access account members would be required to maintain a minimum balance in their account as a deposit against cancellation fees
    - Flexibility to change reservations, free of charge, including a process to facilitate movement within peak periods when reservations are full
    - Cancelation fees could apply if cancelations are made within 48 hours of departure
- **Vehicle processing and terminal operations.** Analysis suggests that a reservation system will work best if either: (1) there is at least 100%-120% of a vessel's capacity available for holding area; or (2) if there are long headways between departures (i.e. more than 1 hour). Based on these criteria:
    - Reservations can be made to work at 17 of 20 WSF terminals (all except Fauntleroy, Tahlequah, and Vashon Island).
    - While the Edmonds terminal has inadequate holding capacity, it could be made to support reservations with modest business rule or operations modifications.
    - The Mukilteo terminal currently meets the minimal operating needs, but the holding area includes land with a short-term lease, and reservations may not be possible without a long-term solution.
    - Customers need to be able to make informed choices with real time information (available space, schedule changes, etc.) updated on variable message signs near terminals and on regional highway network, as well as receiving other types of notifications from WSF
- **Information technology.** The final piece is the information technology that will be needed to support the reservations as defined in the business rules. Based on work to date and the information gathered in the RFI it appears that these rules can be supported with systems available in the marketplace. The key features that will be needed include:
    - Multiple ways to make, change, or cancel reservations including, online, WSF kiosk, phone (data and voice)
    - Real-time communication from WSF including broadcast email, text messaging and twitter to notify of changes or modifications to reservations
    - Easy to use with a focus on and encouragement of customer-managed processes
    - Integration with multiple methods of payment, including Good To Go!, revalue multi-ride account, etc.
    - Data collected and analyzed to learn about and adjust the system for further improvements

Next Steps

6. While the predesign report defined key elements and guidelines of a reservation system, WSF understands that each Ferry Community is distinct.

- **Partnership Groups.** As part of the proposed implementation process, WSF will to work with each individual community to:
    - Establish how the reservation system might work best for that community
    - Identify and assess possible modifications that might be needed to best serve customers in those communities
    - Define how reservations might be phased in over time in the most successful manner.
- Communities served by the Port Townsend-Keystone and Anacortes-Sidney routes, as well as commercial customers serving the San Juan Islands, are the first to be consulted with in this way, as the implementation plan starts with these routes.

7. The proposed implementation program spans 3 phases and 8 years
    - **Phase I**. Initial acquisition and testing of the "industry-standard" reservation system (May 2010 – June 2011).
        - Procure a reservation system and integrate it with existing IT systems.
        - Reservations will be deployed on routes that currently offer reservations.
        - Build ITS enhancements to accurately calculate wait times.
    - **Phase II**. Full implementation in the San Juan Islands and commercial on all routes (July 2011 – June 2015).
        - Extend reservations to all Anacortes-San Juan Island customers and to commercial customers system wide.
        - Build remaining regional ITS enhancements.
    - **Phase III**. Expansion to the Central Sound commuter-oriented routes (July 2015 – June 2018).
        - Operate a 3 – 6 month pilot on one Central Sound route.
        - Extend reservations to Seattle-Bainbridge, Seattle-Bremerton, and Edmonds-Kingston following a successful pilot.